

Attorney Docket Number 20030253.ORI 6

1 1. A method of diffusion welding of different metals in air comprising:

2 mechanically processing of the welded surfaces such as polishing to smooth the
3 surfaces to be welded,

4 applying a hydrocarbon coating to the surfaces to be welded,

5 pressing the surfaces to be welded together while heating the pieces to be welded,

6 heating the pieces to be welded by induction heating to about 80 percent to 90

7 percent of the melting point of the lower temperature melting point piece to be welded,

8 providing additional heating pulses to the butt areas of the pieces after the

9 welding temperature has been achieved, in order to improve the quality of the weld by

10 homogenizing the temperature distribution over the butt area.

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1 2. A method of diffusion welding of different metals in air as in claim 1 further

2 comprising:

3 annealing the welded metals.

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